

IN THE ABSTRACT:

Kindly amend the Abstract of the Disclosure, as follows:

A data transmission system is provided for transmitting user data to and receiving data from a communication channel, ~~comprising~~ including a parity check matrix having M tiers, wherein $M \geq 2$, $D_{\min} = 2 * M$ for $M=1..3$ or $2*M \geq D_{\min} \geq 6$ for $M > 3$, wherein D_{\min} is the minimum Hamming distance, $[[c]]_{tc} = M$, wherein tc is the column weight, and $cycle - 4 = 0$. A linear block encoder encodes the user data in response to the parity check matrix, and a transmitter transmits an output of the linear block encoder to the communication channel. A soft channel decoder decodes data, and a soft linear block code decoder to decode data decoded by the soft channel decoder in response to the parity check matrix.